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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/598,201	06/21/2000	Koji Okamura	35.G2608	7097

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EXAMINER

PHAM, THIERRY L

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/598,201	Applicant(s) OKAMURA ET AL.	
	Examiner Thierry L. Pham	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-54 is/are pending in the application.
- 4a) Of the above claim(s) 47, 48, 50, 51, 53 and 54 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-46, 49 and 52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- This action is responsive to the following communication: RCE filed on 2/13/065.
- Claims 1-3, 5-54 are pending; 1-3, 5-46, 49, 52 are under consideration; claims 47-48, 50-51, 53-54 are withdrawn from consideration; claim 4 has been canceled.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/13/06 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-7, 9-13, 15-22, 24-28, 30-37, 39-43, 45-46, 49, 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al (U.S. 6204867), and in view of Kojima et al (US 5283667).

Regarding claim 1, Fujimoto discloses an image processing apparatus (digital copier, fig. 3) comprising:

- input means (image data input portion 30, fig. 3) for inputting an image of one of a plurality of image types (color or monochrome image types, col. 4, lines 26-47);
- image processing means (image processing portion 31, fig. 3) for generating a recording image data based on the input image (based on input image data, fig. 3), the image processing means

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being capable of generating first recording image data (i.e. color image data, fig. 5) for recording the image on a recording material at a predetermined recording density (color input image data is recording at first recording speed, fig. 18), and a second recording image data (i.e. monochrome input image data, fig. 5) for recording the image on a recording medium at a recording density lower than that of the first recording image data (monochrome input image data is recording at second speed, fig. 18, wherein second speed is greater than first recording speed, col. 7, lines 20-27 and it is known in the art lower recording speed provides high density output image data than higher recording speed);

- selecting means (control panel including selecting means for selecting first or second recording modes, fig. 4, col. 4, lines 27-34 and col. 16, lines) for use of an operator in selecting a recording mode from among a first recording mode (first recording mode for recording color image data, col. 3, lines 15-24) for recording the first recording image (color image information density, col. 3, lines 15-24) and a second recording mode (second recording mode for recording monochrome, col. 3, lines 15-24) for recording the second recording image data;
- determining means (image processing portion 31 includes original discrimination 31h for determining whether an input image is color or monochrome, fig. 6, col. 2, lines 42-52) for determining if the input image is a predetermined image type.

Fujimoto does not explicitly suggest a control means for changing to the first recording mode, when the second recording mode is selected by operator and said determining means determines that the input image is the predetermined image type suitable for recording by the first recording mode, wherein the second recording mode as selected by the operator is canceled.

Fujimoto's first embodiment teaches a print mode is automatically selected based upon determined image type (fig. 5, col. 16-17) and Fujimoto's ninth embodiment teaches a control panel 38 (fig. 3) for selecting a print mode (e.g. color print mode or monochrome mode) for copying input image data. It would have been obvious to one of ordinary skill in the art to combine first and ninth embodiments of Fujimoto to have a control means to cancel the selected print mode (e.g. color print mode) that is not appropriate for the determined image type (i.e. monochrome image type) and to select a print mode (i.e. monochrome print mode) that is most appropriate for the determined image type (monochrome image type), therefore, it is obvious to cancel the selected the color print mode and to select a monochrome print mode for copying the

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determined monochrome image. In other words, if a color print mode is selected for copying, but a determined input image type is monochrome, therefore, it is well known to cancel the selected color print mode and to switch to a monochrome print mode for copying the determined monochrome image. By doing so, reduction of the life of the motors and/or problems of noise and wasted power consumption can be prevented and reduction of waiting time (Fujimoto, col. 8, lines 33-42) and to avoid unnecessary driving of the motors (i.e. CMY motors) which will not be engaged in monochrome image recording (col. 17, lines 55-65).

In addition, Fujimoto discloses first and second recording modes (color and monochrome print modes) for recording color and/or monochrome image data, but fails to explicitly disclose a recording mode by "reducing the number of recording dots through decimation".

Kojima et al, in the same field of endeavor for image processing apparatus, teaches a recording mode by reducing the number of recording dots through decimation (selecting decimation mode based upon type of input image data and by reducing the number of dots, col. 4, lines 45-60 and col. 5, lines 21-67).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify image processing apparatus of Fujimoto to include a recording mode by reducing a number of dots through decimation as per teachings of Kojima because of a following reason: (●) operational efficiency of the color image forming apparatus is improved (Fujimoto, col. 2, lines 1-5); (●) to obtain high output quality image by using different recording modes/schemes by reducing recording dots via decimation mode (Kojima, col. 3, lines 3-8).

Therefore, it would have been obvious to combine Fujimoto with Kojima to obtain the invention as specified in claim 1.

Regarding claim 2, Fujimoto further discloses an image processing apparatus according to Claim 1, further comprising a recording means for recording the first recording image data or the second recording image data according to the mode being used (color or monochrome modes, fig. 7).

Regarding claim 3, Fujimoto further discloses an image processing apparatus according to Claim 1, wherein said input means inputs one-pixel binary image data (image with black

pixel, Fig. 5, col. 12, lines 47-55).

Regarding claim 5, Fujimoto further discloses an image processing apparatus according to claim 3, wherein said input means inputs one of a binary image data received from another communication apparatus (i.e. external devices, col. 19, lines 60-67) and binary data obtained by binarizing multi-valued image data obtained by reading a subject copy.

Regarding claim 6, Fujimoto further discloses an image processing apparatus according to Claim 1, wherein the predetermined image type is a color image (Fig. 5), and said determining means determines whether the input image is a monochrome image or a color image (Fig. 5); and said control means changes (mode managing means, Fig. 5, col. 3, lines 15-32) to the first recording mode, when the second recording mode is selected by operator, and said determining means determines that the input image is a color image.

Regarding claim 7, Fujimoto further discloses an image processing apparatus according to Claim 1, wherein when the input image type is a monochrome image, and said determining means determines (separation/screen circuit, col. 14, lines 23-31) whether the monochrome image is a character image or a halftone image; and said control means changes (if it is not color image, switch to monochrome image mode, Fig. 6) to the first recording mode, when the second recording mode is selected by operator and said determining means determines that the monochrome image is a halftone image.

Regarding claims 16-22: Claims 16-22 are the methods corresponding the apparatus and recite limitations that are similar and in the same scope of invention as to those in claims 1-3, 5-7; therefore, claims 16-22 are rejected for the same rejection rationale/basis as described in claims 1-3, 5-7 above.

Regarding claims 31-37: Claims 31-37 recite limitations that are similar and in the same scope of invention as to those in claims 1-3,5-7 except computer readable memory for storing computer programs. All computers/printers have some type of computer readable medium (i.e.

image memory, fig. 3, Fujimoto) for storing computer programs, hence claims 31-37 would be rejected using the same rationale as in claims 1-3, 5-7.

Regarding claims 15, 30, and 45 recite limitations that are similar and in the same scope of invention as to those in claims 1 above; therefore, claims 15, 30, and 45 are rejected for the same rejection rationale/basis as described in claim 1. The combinations of Fujimoto and Kakutani teaches plurality of recording modes for recording different input image data, please see claim 1 rejection for more details.

Regarding claim 9, Fujimoto discloses an image processing apparatus (digital copier, fig. 3) comprising:

- input means (image data input portion 30, fig. 3) for inputting an image of one of a plurality of image types (color or monochrome image types, col. 4, lines 26-47);
- image processing means (image processing portion 31, fig. 3) for generating a recording image data based on the input image (based on input image data, fig. 3), the image processing means being capable of generating first recording image data (i.e. color image data, fig. 5) for recording the image on a recording material at a predetermined recording density (color input image data is recording at first recording speed, fig. 18), and a second recording image data (i.e. monochrome input image data, fig. 5) for recording the image on a recording medium at a recording density lower than that of the first recording image data (monochrome input image data is recording at second speed, fig. 18, wherein second speed is greater than first recording speed, col. 7, lines 20-27 and it is known in the art lower recording speed provides high density output image data than higher recording speed);
- selecting means (control panel including selecting means for selecting first or second recording modes, fig. 4, col. 4, lines 27-34 and col. 16, lines) for use of an operator in selecting a recording mode from among a first recording mode (first recording mode for recording color image data, col. 3, lines 15-24) for recording the first recording image (color image information density, col. 3, lines 15-24) and a second recording mode (second recording mode for recording monochrome, col. 3, lines 15-24) for recording the second recording image data, and a third recording mode

(different recording modes can be selected via control panel for recording different types of inputted image data, fig. 8-11) for recording the third recording image data on the recording material, the third image data being obtained from the input image data without decimating the image (forming/printing the inputted image data without having to decimate the image, fig. 3).

- determining means (image processing portion 31 includes original discrimination 31h for determining whether an input image is color or monochrome, fig. 6, col. 2, lines 42-52) for determining if the input image is a predetermined image type; and

Fujimoto does not explicitly suggest a control means for changing to the first recording mode, when the second recording mode is selected by operator and said determining means determines that the input image is the predetermined image type suitable for recording by the first recording mode, wherein the second recording mode as selected by the operator is canceled.

Fujimoto's first embodiment teaches a print mode is automatically selected based upon determined image type (fig. 5, col. 16-17) and Fujimoto's ninth embodiment teaches a control panel 38 (fig. 3) for selecting a print mode (e.g. color print mode or monochrome mode) for copying input image data. It would have been obvious to one of ordinary skill in the art to combine first and ninth embodiments of Fujimoto to have a control means to cancel the selected print mode (e.g. color print mode) that is not appropriate for the determined image type (i.e. monochrome image type) and to select a print mode (i.e. monochrome print mode) that is most appropriate for the determined image type (monochrome image type), therefore, it is obvious to cancel the selected the color print mode and to select a monochrome print mode for copying the determined monochrome image. In other words, if a color print mode is selected for copying, but a determined input image type is monochrome, therefore, it is well known to cancel the selected color print mode and to switch to a monochrome print mode for copying the determined monochrome image. By doing so, reduction of the life of the motors and/or problems of noise and wasted power consumption can be prevented and reduction of waiting time (Fujimoto, col. 8, lines 33-42) and to avoid unnecessary driving of the motors (i.e. CMY motors) which will not be engaged in monochrome image recording (col. 17, lines 55-65).

In addition, Fujimoto discloses first and second recording modes (color and monochrome print modes) for recording color and/or monochrome image data, but fails to explicitly disclose a recording mode by "reducing the number of recording dots through decimation".

Kojima et al, in the same field of endeavor for image processing apparatus, teaches a recording mode by reducing the number of recording dots through decimation (selecting decimation mode based upon type of input image data and by reducing the number of dots, col. 4, lines 45-60 and col. 5, lines 21-67).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify image processing apparatus of Fujimoto to include a recording mode by reducing a number of dots through decimation as per teachings of Kojima because of a following reason: (●) operational efficiency of the color image forming apparatus is improved (Fujimoto, col. 2, lines 1-5); (●) to obtain high output quality image by using different recording modes/schemes by reducing recording dots via decimation mode (Kojima, col. 3, lines 3-8).

Therefore, it would have been obvious to combine Fujimoto with Kojima to obtain the invention as specified in claim 9.

Regarding claim 10, Fujimoto further teaches an image processing apparatus according to claim 9, further comprising a recording means (i.e. mode manager 37, fig. 2a) for recording in first, second, or third recording mode.

Regarding claim 11, Fujimoto further teaches an image processing apparatus according to claim 9, wherein said input means inputs one-pixel binary image data (image with black pixel, Fig. 5, col. 12, lines 47-55).

Regarding claim 12, Fujimoto further teaches an image processing apparatus according to claim 11, wherein said input means inputs one of binary data received from another communication apparatus (external devices, col. 19, lines 60-67) and binary data by binarizing multi-valued image data obtained by reading a subject copy.

Regarding claim 13, Fujimoto further discloses an image processing apparatus according to Claim 9, wherein the predetermined image type is a color image (Fig. 5), and said determining means determines whether the input image is one of a monochrome image and a color image (Fig. 5); and said control means changes (mode managing means, Fig. 5, col. 3, lines 15-32) to

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the third recording mode, when the first and second recording mode is selected by said selecting means, and said determining means determines that the input image is a color image.

Regarding claims 24-28: Claims 24-28 are the methods corresponding the apparatus and recite limitations that are similar and in the same scope of invention as to those in claims 9-13; therefore, claims 24-28 are rejected for the same rejection rationale/basis as described in claims 9-13 above.

Regarding claims 39-43, 45: Claims 39-43, 45 recite limitations that are similar and in the same scope of invention as to those in claims 9-13 except computer readable memory for storing computer programs. All computers/printers have some type of computer readable medium (i.e. image memory, fig. 3, Fujimoto) for storing computer programs, hence claims 39-43, 45 would be rejected using the same rationale as in claims 9-13.

Regarding claims 46, 49, and 52 recite limitations that are similar and in the same scope of invention as to those in claims 1, 9, 15 as described above; therefore, claims 46, 49, and 52 are rejected for the same rejection rationale/basis as described in claims 1, 9, 15.

Claims 8, 14, 23, 29, 38, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto and Kojima as applied to claims 1, 9, 16, 24, 31 and 44 (respectively) above, and further in view of Hattori (US 5455895).

Regarding claims 8, 14, 23, 29, 38, and 44, the combinations of Fujimoto and Kojima fail to teach and/or suggest input means input image having plurality of pages; determining means determines the image data type of the input image in units of a page; and control means controls the recording mode in units of a page.

Hattori, in the same field of endeavor for selecting most appropriate print mode corresponding to image data, teaches input means input image having plurality of pages (col. 5, lines 30-40); determining means determines the image data type (abstract and fig. 2, and col. 3, lines 20-50) of the input image in units of a page; and control means controls the recording mode in units of a page (col. 5, lines 30-40).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify image processing apparatus of Fujimoto to include determining means determines the image data type of input image in units of a page and control means controls the recording mode in units of a page as taught by Hattori because of a following reason: (●) controls the recording mode in units of a page enhances the total outlook of an entire print job of plural pages and to further reduction of the life of the motors and/or problems of noise; wasted power consumption can be further prevented; and further reduction of waiting time (Fujimoto, col. 8, lines 33-42) and to further avoid unnecessary driving of the motors (i.e. CMY motors) which will not be engaged in monochrome image recording (col. 17, lines 55-65) of particular page. For example, monochrome pages of print job will utilize monochrome print mode, and color pages of print job will utilize color print mode.

Therefore, it would have been obvious to combine Fujimoto and Kojima with Hattori to obtain the invention as specified in claims 8, 14, 23, 29, 38, and 44.

Response to Arguments

Applicant's arguments, see pages 27-29, filed 2/13/06, with respect to the rejection(s) of independent claim (s) 1, 9, 15, 16, 24, 30, 31, 39, and 45 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of different interpretation of previous applied prior art references.

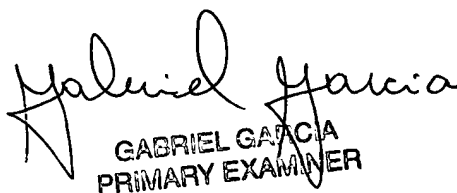
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L. Pham whose telephone number is (571) 272-7439. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571)272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thierry L. Pham

GABRIEL GARCIA
PRIMARY EXAMINER